

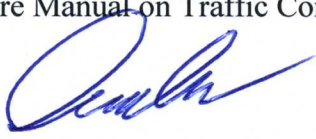



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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SECRETARY

MEMORANDUM

TO: All Users of the Delaware Manual on Traffic Control Devices

VIA: Don Weber, P.E.
Chief Traffic Engineer 

FROM: Adam Weiser, P.E., PTOE
Safety Programs Manager 

DATE: July 20, 2011

SUBJECT: Traffic Control within Intersections

Construction operations within intersections require the deployment of complex temporary traffic control measures. To maintain traffic safely and efficiently sometimes requires the need for flaggers as well as uniformed law enforcement personnel (traffic officers) to direct traffic within intersections, sometimes against the normal traffic signal indications.

The purpose of this memorandum is to address concerns and questions related to the use of certified flaggers and uniformed law enforcement personnel to direct traffic within signalized intersections during construction operations. The information provided in this memorandum can also be applied to unsignalized intersections.

Legal Information

Title 21, Chapter 41, Section 4103(a) of the Delaware Code states "No person shall willfully fail or refuse to comply with any lawful order or direction of any police officer or authorized flag person or fire police officer or uniformed adult school crossing guard invested by law with authority to direct, control or regulate vehicle and pedestrian traffic. This subsection shall not operate to relieve a driver of the duty to operate the driver's vehicle with due regard to the safety of all persons using the highway."

In addition, Title 21, Chapter 41, Section 4107(a) of the Delaware Code states, "The driver of any vehicle shall obey the instructions of any traffic-control device applicable thereto placed in accordance with this title, unless otherwise directed as authorized in Section 4103 of this title, subject to the exceptions granted the driver of an authorized emergency vehicle in this title."



The above references from Delaware Code indicate that the driver of a motor vehicle must obey the direction of a flagger or uniformed law enforcement officer, even if the direction is in conflict with the traffic control device that is present at the intersection under control by the flagger or law enforcement personnel. However, this may not provide for the safest operation of vehicles through the intersection.

The following paragraphs provide information regarding temporary traffic control at intersections of two two-lane, two-way roadways and at intersections of a multilane roadway with either a two-lane, two-way roadway or another multilane roadway.

Work within Intersections

For work within an intersection, a minimum of one flagger for each intersection approach shall be provided and these flaggers shall be stationed a minimum of 50 feet upstream of the stop line. An additional flagger shall be provided at the intersection and this flagger shall be designated as the Primary Flagger that controls the situation and all other flaggers must take commands from the Primary Flagger. At signalized intersections, a traffic officer shall also be present. The traffic officer's responsibility shall include the following:

1. The traffic officer shall place the traffic signal in flash mode. The officer shall remain on location as long as the traffic signal is in flash mode. At no time shall the traffic officer leave the location and relinquish control to the flaggers.
2. The traffic officer shall direct traffic through the intersection.
3. The traffic officer shall coordinate directly with the Primary Flagger who will relay information between the traffic officer and the approach flaggers.
4. The traffic officer shall place the traffic signal in normal mode once the operation is complete and the temporary traffic control devices are clear of the roadway.

The flagging operation shall be operated to provide minimal delay for all approaches. Flaggers are required to monitor the length of their queues and coordinate that information to the Primary Flagger so as to provide for the most efficient flagging operation possible.

In order to simplify the operation, consideration should be given to closing exclusive turn-lanes and having turning traffic detoured to other routes. On multilane roadways, one flagger shall not control more than one lane of traffic. Flaggers should not be placed between two or more open lanes and should have a designated escape route. Consideration should be given to closing travel lanes on multilane roadways in advance of the work area and flagger stations to further simplify the intersection flagging operation. The following should also be considered:

1. Consideration should be given to temporarily converting the side street approaches to right-in/right-out configuration only, to temporarily eliminate cross traffic. Diverted turning movements should be detoured onto the mainline roadway and directed to make a u-turn at the next available median crossover or an official detour route should be

established. If this option is chosen, it must be coordinated and approved by the Traffic Safety Section.

2. Depending upon the type of work that is occurring and the location of the intersection, consideration to closing the intersection to traffic should be given. Closing the intersection to traffic requires an approved detour route. The Engineer and/or Contractor shall coordinate with the Traffic Safety Section for any detours that may be necessary. This coordination shall take place a minimum of two (2) weeks prior to the implementation of the detour, if detour plans are not included in the Contract Documents. Consideration must also be given to performing the work during off-peak hours to minimize the disruption of traffic.
3. In all cases, the Transportation Management Center (TMC) shall be notified when any intersection is put under flagger control, uniformed law enforcement control or detour. In addition, the TMC shall be notified when a traffic signal is placed in flash mode by law enforcement personnel and when the signal is returned to stop-and-go operation. This notification is the responsibility of the project inspector or the uniformed law enforcement officer, if an inspector is not present. The TMC can be contacted at (302) 659-4600.

Work within Close Proximity to a Signalized Intersection

Certain types of construction activities on a corridor with numerous signalized intersections may cause traffic congestion which may cause traffic to queue through adjacent signalized intersections. When traffic queues through adjacent signalized intersections, gridlock can occur because side street traffic cannot enter the intersection safely due to mainline traffic blocking the intersection. For these types of operations, the following steps should be implemented:

1. Flaggers should be placed at each signalized intersection within the work zone. The flagger stations in this situation shall be placed in advance of the traffic signal.
2. When the flaggers notice that the downstream queue is reaching their intersection, the flaggers shall display the STOP sign to approaching motorists on each approach, preventing them from entering the intersection to keep traffic from blocking the intersection.
3. When there is sufficient downstream storage, the flaggers may display the SLOW sign to approaching traffic and allow traffic to travel through the intersection to the back of the downstream queue.
4. The flagger shall repeat this procedure for the duration of the work day or until the queuing is minimized.
5. The flagger shall be alert for traffic and traffic signalization changes to avoid sending traffic through the intersection on conflicting signal indications.
6. Law enforcement personnel may be used in lieu of flaggers in this situation.

All flagging operations shall comply with Section 6E of the Delaware MUTCD. For further questions regarding this information, please contact the Traffic Safety Section at (302) 659-4060.